

WMUM-DT CHANNEL 7 MINOR
MODIFICATION OF CONSTRUCTION
PERMIT APPLICATION
COCHRAN, GEORGIA
(Georgia Public Telecommunications Commission)

KESSLER AND GEHMAN ASSOCIATES, INC.
TELECOMMUNICATIONS CONSULTING ENGINEERS

20080123

Prepared by William T. Godfrey, Jr.

KGGA

507 N.W. 60th Street, Suite C
Gainesville, Florida 32607



Kessler and Gehman Associates, Inc.

Telecommunications Consulting Engineers

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A MINOR MODIFICATION OF CONSTRUCTION PERMIT APPLICATION TO MAKE CHANGES TO THE GEORGIA PUBLIC TELECOMMUNICATIONS COMMISSION (GPTC) DIGITAL BROADCAST FACILITY, WMUM-DT CHANNEL 7, COCHRAN, GA (BPEDT-20020923ABB).

The firm Kessler and Gehman Associates, Inc. has been retained by the Georgia Public Telecommunications Commission (GPTC), Atlanta, GA to prepare engineering studies and the engineering portion of a minor modification of construction permit application requesting authorization to change antennas, decrease antenna height and increase the effective radiated power (ERP) of the authorized WMUM-DT Channel 7 digital facility to prepare for post-transition DTV operation.

Discussion

GPTC is licensed to operate WMUM-TV (BLET-19900608KE) on NTSC Channel 29 with an ERP of 5,000 kW at an antenna height radiation center of 347 meters above ground level (AGL) using a top-mounted, directional antenna. WMUM-DT is currently authorized (BPEDT-20000425AAQ) to operate its pre-transition facility on Channel 7 with an ERP of 22 kW with an antenna height radiation center of 358 meters AGL. As requested by GPTC, Channel 7 is assigned as the WMUM-DT post-transition channel for digital operation as adopted in the final DTV Table of Allotments (TOA). GPTC awarded an antenna contract to procure a Dielectric model TLS-V8 omnioid antenna for the pre- and post-transition WMUM-DT Channel 7 digital broadcast facility.

GPTC proposes to modify the existing WMUM-DT Channel 7 construction permit by changing the authorized top-mount, nondirectional, Dielectric model TF-2HT batwing antenna with the proposed Dielectric model TLS-V8 side-mount, omnioid antenna. The change in



antenna systems will result in an omni-for-omni swap and a slight increase in ERP, from the authorized 22 kW to the proposed 31 kW, to compensate for the decreased antenna height and maintain “freeze” compliance. Therefore, the proposed F(50,90) 36.0 dBuV/m noise limited contour will not exceed the authorized F(50,90) 36.0 dBuV/m noise limited contour in any azimuthal direction (Exhibit 8).

Accordingly, this minor modification of construction permit application requests FCC authorization to make the following changes: 1) change antenna system from the authorized Dielectric model TF-2HT horizontally polarized omnidirectional antenna to the proposed Dielectric model TLS-V8 horizontally polarized omnioid antenna; 2) decrease the antenna height radiation center from the authorized top-mount height of 358.0 meters AGL to the proposed side-mount height of 320.0 meters AGL; and 3) increase the ERP from the authorized 22 kW to the proposed 31 kW to compensate for the 38.0 meter antenna height reduction.

Exhibit 8 is an FCC coverage contour map depicting the authorized F(50,90) 36.0 dBuV/m protected noise limited contour (black contour) and the proposed F(50,90) 36.0 dBuV/m protected noise limited contour (red contour). It can be seen that the proposed noise limited contour would not exceed the authorized noise limited contour in any azimuthal direction. Therefore, the proposed facility would not violate the freeze and interference studies are not required.

Exhibit 9 is a distance to contour tabulation of the WMUM-DT Channel 7 authorized facility. This exhibit depicts the distance, in kilometers, from the transmitter to the authorized WMUM-DT noise limited contour in all azimuthal directions.

Exhibit 10 is a distance to contour tabulation of the proposed WMUM-DT Channel 7 facility. This exhibit depicts the distance, in kilometers, from the transmitter to the proposed WMUM-DT noise limited contour in all azimuthal directions.



Exhibit 11 is a distance to contour comparison spreadsheet comparing the distance from the transmitter to the noise limited contour of the authorized facility (Exhibit 9) and the proposed facility (Exhibit 10). Column four (from left to right) in Exhibit 11 depicts “PASS” if the proposed distance to contour values are less than or equal to the authorized distance to contour values or “FAIL” if the proposed distance to contour values are greater than the authorized distance to contour values. It can be seen that the authorized distance to contour values are greater than or equal to the proposed distance to contour values in all azimuthal directions which further verifies quantitatively that the proposed facility would be in compliance with the FCC filing freeze (DA 04-2446) .

Exhibit 12 is a principal community contour map demonstrating that the proposed WMUM-DT Channel 7 F(50,90) 43.0 dBuV/m Principal Community contour would completely encompass the principal community of Cochran, GA.

Expedited Processing

The WMUM-DT Channel 7 post-transition facility is scheduled to be operational on February 18, 2008. Section V.D.1. of the DTV Third Periodic Review Report and Order (R&O) states that the FCC will provide expedited processing for certain stations that timely apply for a construction permit to build there post-transition channel. The R&O states that expedited processing would generally be completed within ten days for applications that would not seek to expand beyond the station’s final post-transition DTV Table Appendix B facilities; that would match or closely approximate the DTV Table Appendix B facilities; and filed within 45 days of the effective date of the R&O. This application does not propose expansion in any direction and proposes a post-transition DTV Channel 7 facility that almost perfectly matches the DTV Table Appendix B facilities (Exhibits 8-11). The proposed facility would result in less than a 0.05% population reduction and it is anticipated that the R&O will become effective in a matter of days. Accordingly, GPTC requests expedited processing of this application so that it can go on the air with its post-transition DTV facility in February 2008 as scheduled.



Interference Studies

The proposed noise limited contour will not exceed the authorized noise limited contour in all azimuthal directions. Therefore, interference studies are not required (Exhibit 8).

Transmitter Site

The proposed WMUM-DT antenna is a Dielectric model TLS-V8 omnioid antenna that will be side-mounted on the WMUM tower. The tower is registered with the FCC and the registration number is 1018798. The support structure is located off of Salem Church Road, approximately 7.5 miles NE of Cochran, GA (Exhibit 7). The proposed antenna height radiation center is 320.0 meters AGL (Exhibit 3).

Exhibits

Exhibits 1 and 2 represent WMUM's administration data, antenna and antenna structure specifications.

Exhibit 3 depicts the profile view of the proposed antenna on the antenna structure with all the appropriate elevations.

Exhibit 4 displays the elevation pattern from 3° above the horizontal to 11° below the horizontal.

Exhibit 5 displays the elevation pattern from 10° above the horizontal to 90° below the horizontal.



Exhibit 6 displays the elevation pattern relative field value tabulation from 10° above the horizontal to 90° below the horizontal.

Exhibit 7 depicts the location of the WMUM-DT site on a 7.5-Minute (Series) Topographic map.

Exhibit 8 depicts the WMUM-DT Channel 7 authorized and proposed noise limited contours and demonstrates that the proposed noise limited contour (red contour) would not exceed the authorized noise limited contour (black contour) in any azimuthal direction.

Exhibit 9 is a distance to contour tabulation of the WMUM-DT authorized facility. This exhibit depicts the distance, in kilometers, from the transmitter to the authorized WMUM-DT noise limited contour in all azimuthal directions.

Exhibit 10 is a distance to contour tabulation of the proposed WMUM-DT facility. This exhibit depicts the distance, in kilometers, from the transmitter to the proposed WMUM-DT noise limited contour in all azimuthal directions.

Exhibit 11 is a distance to contour comparison tabulation spreadsheet between the authorized WMUM-DT facility and the proposed WMUM-DT facility. The spreadsheet demonstrates that the authorized antenna distance to contour values are greater than or equal to the proposed distance to contour values in all azimuthal directions.

Exhibit 12 depicts the proposed WMUM-DT F(50,90) 43.0 dBuV/m Principal Community contour, boundaries of the principal community to be served, and the transmitter location with radials every 45° and demonstrates that the principal community requirement would be satisfied by completely encompassing the entire city limits of Cochran, GA.



Environmental Impact

The proposed construction would have no significant environmental impact as defined in §1.1307 of the FCC Rules. The digital transmitter, 3-inch (50-ohm) air dielectric transmission line and antenna system will produce an ERP of 31 kW. It was determined that the maximum lobe of radiation would occur at approximately 380.0 feet from the base of the tower (1,111.0-foot radial distance from the antenna center). At approximately 380.0 feet from the base of the tower, the depression angle of the main lobe would be approximately 70° below the horizontal. At that point, the relative field is 0.171 and the power density six feet above the ground would be approximately 0.0003 mW/cm². This would only be 0.026% of the Maximum Permissible Exposure (MPE) limits for Occupational/Controlled Exposure and only 0.130% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (ANSI).

Since operation of the proposed WMUM-DT Channel 7 facility would not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, the proposed WMUM-DT facility would not be considered a “significant contributor” to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions would be insignificant and well within the maximum allowable requirements.

If other antennas are placed on the tower in the future, the applicant will cooperate with those users by reducing or completely terminating the power to the antenna when maintenance workers are in danger from electromagnetic radiation emanating from the antenna.



Kessler and Gehman Associates, Inc.

Telecommunications Consulting Engineers

Certification

This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



KESSLER AND GEHMAN ASSOCIATES, INC.

A handwritten signature in blue ink that reads "William T. Godfrey, Jr." The signature is written over a horizontal line.

WILLIAM T. GODFREY, JR.
Telecommunications Technical Consultant

23 January, 2008

WMUM-DT CHANNEL 7
COCHRAN, GA

ENGINEERING SPECIFICATIONS

A. Transmitter Site:

Geographic coordinates:

North Latitude	32° 28' 11"
West Longitude	83° 15' 17"

Transmitter Site Address: **Located off of Salem Church Road approximately 7.5 miles NE of Cochran, GA**

B. Main Studio Site Address: 260 14th Street N.W., Atlanta, GA 30318.

C. Proposed Facility:

DTV Channel	Number	7
	Frequency	174-180 MHz
	Offset	N/A

D. Antenna Height:

Height of Site Above Mean Sea Level (AMSL)	116.1 M
Overall Height of Structure Above Ground	356.3 M
(including all appurtenances)	
Overall Height of Structure Above Mean Sea Level	472.4 M
(including all appurtenances)	
Height of Site Above Average Terrain	11.6 M
Antenna Height Radiation Center (R/C) Above Ground	320.0 M
Antenna Height R/C Above Mean Sea Level	436.1 M
Average of All Non-Odd Radials	104.5 M
Antenna Height R/C Above Average Terrain	331.6 M

E. System Parameters – Horizontal Polarization:

Transmitter Power Output	6.7 kW
Maximum Power Input to Antenna	3.9 kW
Total System Loss	2.35 dB
Transmission Line Efficiency	58.2%
RMS Gain in Beam Maximum	9.03 dB
RMS Gain in Horizontal Plane	8.92 dB
Maximum Effective Radiated Power	14.91 dBk
In Beam Maximum	31.0 kW
Maximum Effective Radiated Power	14.80 dBk
In Horizontal Plane	30.2 kW

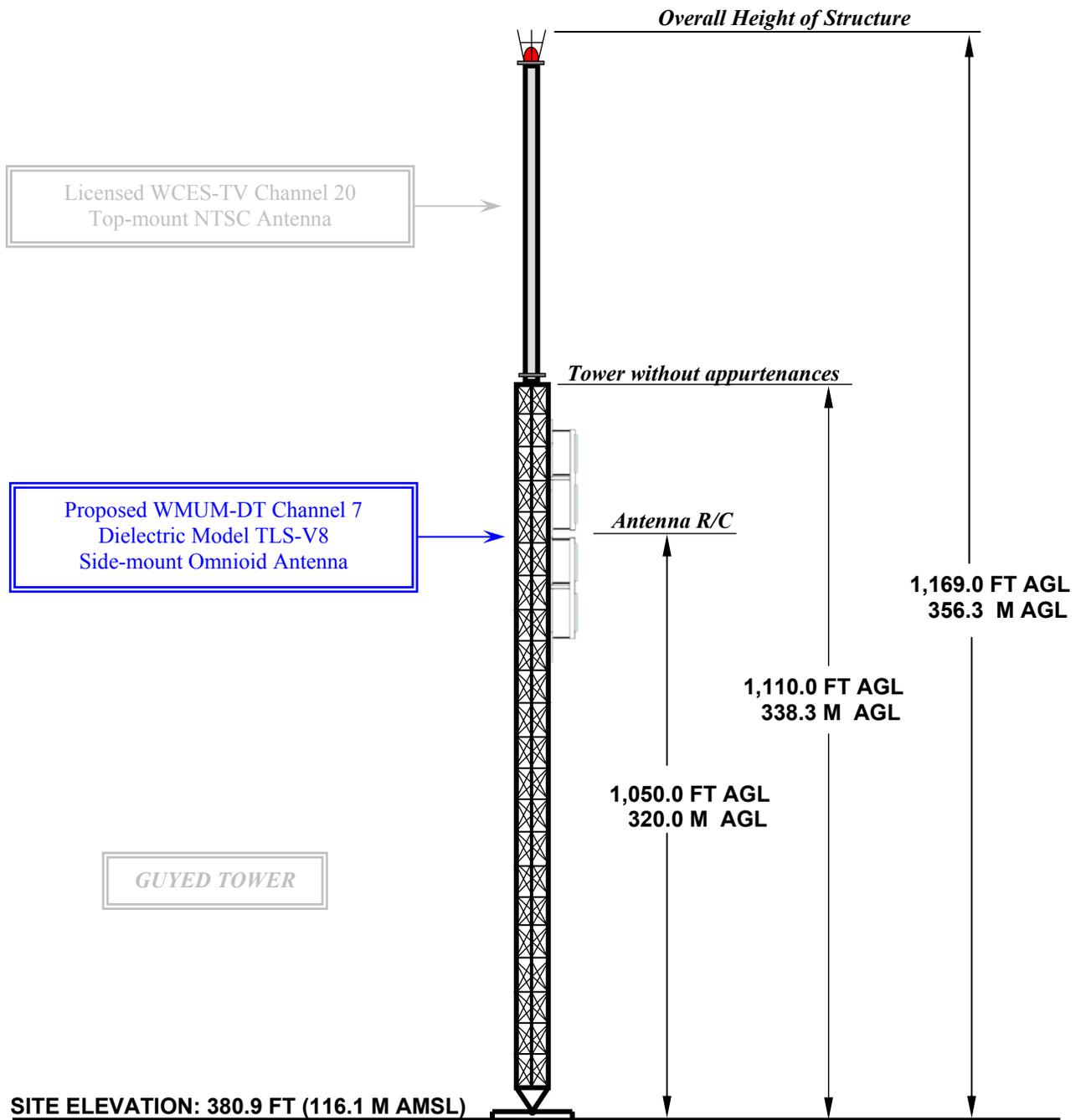
**WMUM-DT Channel 7
COCHRAN, GEORGIA**

**DATA FOR PROPOSED DTV
NONDIRECTIONAL TRANSMITTING ANTENNA**

- A. **Antenna:** Dielectric Model TLS-V8 horizontally polarized, directional, side-mount antenna.
- B. **Electrical Beam Tilt:** 0.5 degrees
- C. **Mechanical Beam Tilt:** None
- D.

<u>Peak Directional Gain</u>	<u>Horizontal Polarization</u>
Maximum:	8.0 (9.03 dB)
Horizontal:	7.8 (8.92 dB)
- E. **Length:** 48.3 feet (14.7 meters)
- F. **Transmitter Power Output (TPO):** 6.7 kW
- G. **Transmission Line:** 3" Air Dielectric 50-ohm
- H. **Transmission Line Efficiency:** 58.2%
- I. **Transmission Line Length:** 1,160 feet
- J. **Transmission Line Loss:** 0.203 dB/100 ft
- K. **Transmission Line Attenuation:** 2.35 dB

PROPOSED WMUM-DT ELEVATION VIEW



OVERALL HEIGHT AGL:	356.3 M
OVERALL HEIGHT AMSL:	472.4 M
RADIATION CENTER AGL:	320.0 M
RADIATION CENTER AMSL:	436.1 M
RADIATION CENTER HAAT:	331.6 M
AVG OF ALL NON-ODD RADIALS:	104.5 M
SITE HAAT:	11.6 M

COORDINATES (NAD 27):
N. LATITUDE 32° 28' 11"
W. LONGITUDE 83° 15' 17"

Antenna Structure Registration Number:
 1018798

NOTE: NOT TO SCALE

KESSLER AND GEHMAN
 TELECOMMUNICATIONS CONSULTING ENGINEERS
 507 N.W. 60th Street, Suite C
 Gainesville, Florida 32607

WMUM-DT CHANNEL 7
 COCHRAN, GEORGIA

20080116

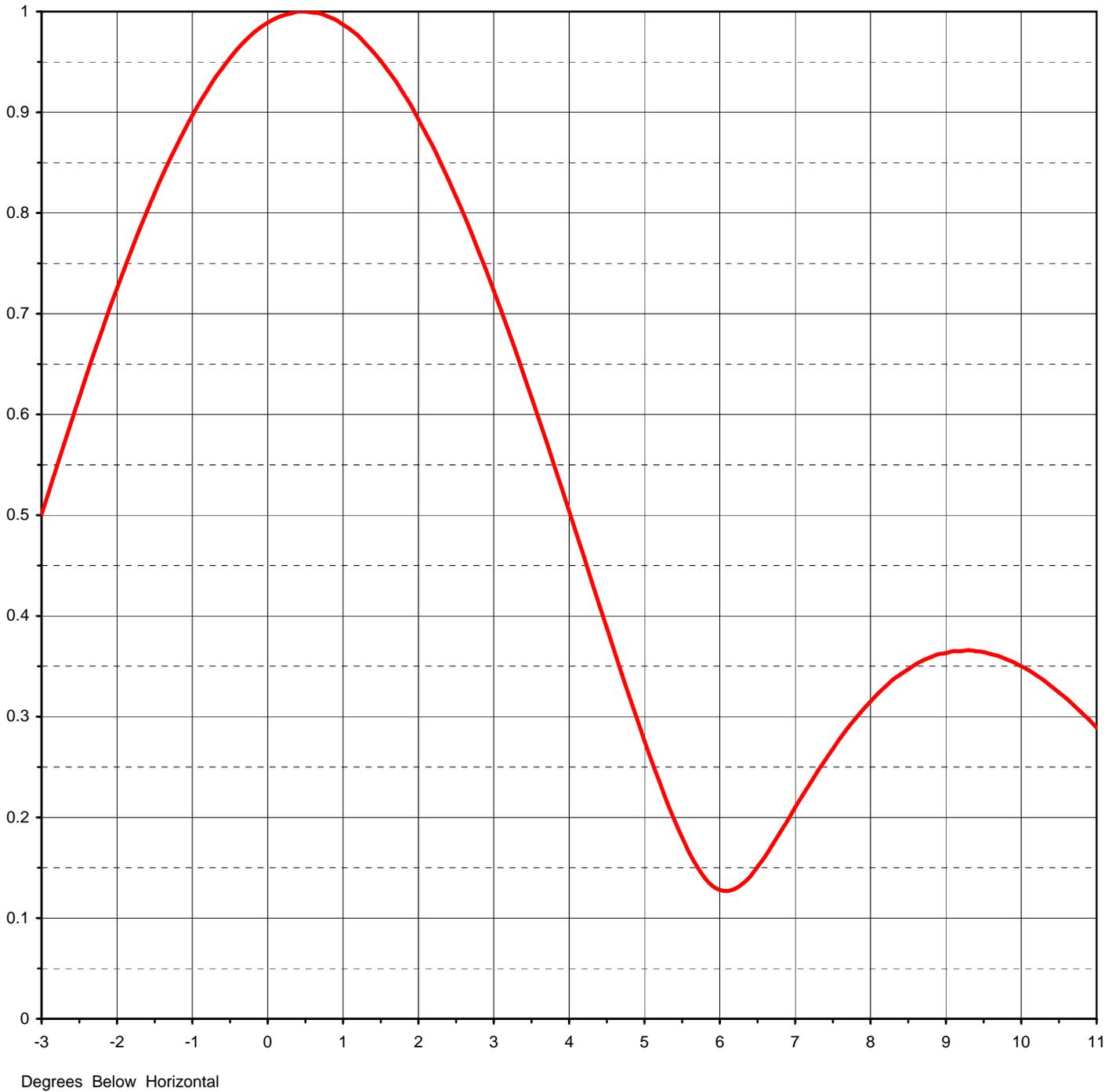
EXHIBIT 3



Proposal Number **C-00461** Revision: **1**
Date **29-Jun-06**
Call Letters **WMUM-DT** Channel **7**
Location **Cochran, GA**
Customer **GPTV**
Antenna Type **TLS-V8**

ELEVATION PATTERN

RMS Gain at Main Lobe	8.00 (9.03 dB)	Beam Tilt	0.50 deg
RMS Gain at Horizontal	7.80 (8.92 dB)	Frequency	177.00 MHz
Calculated / Measured	Calculated	Drawing #	08S080050

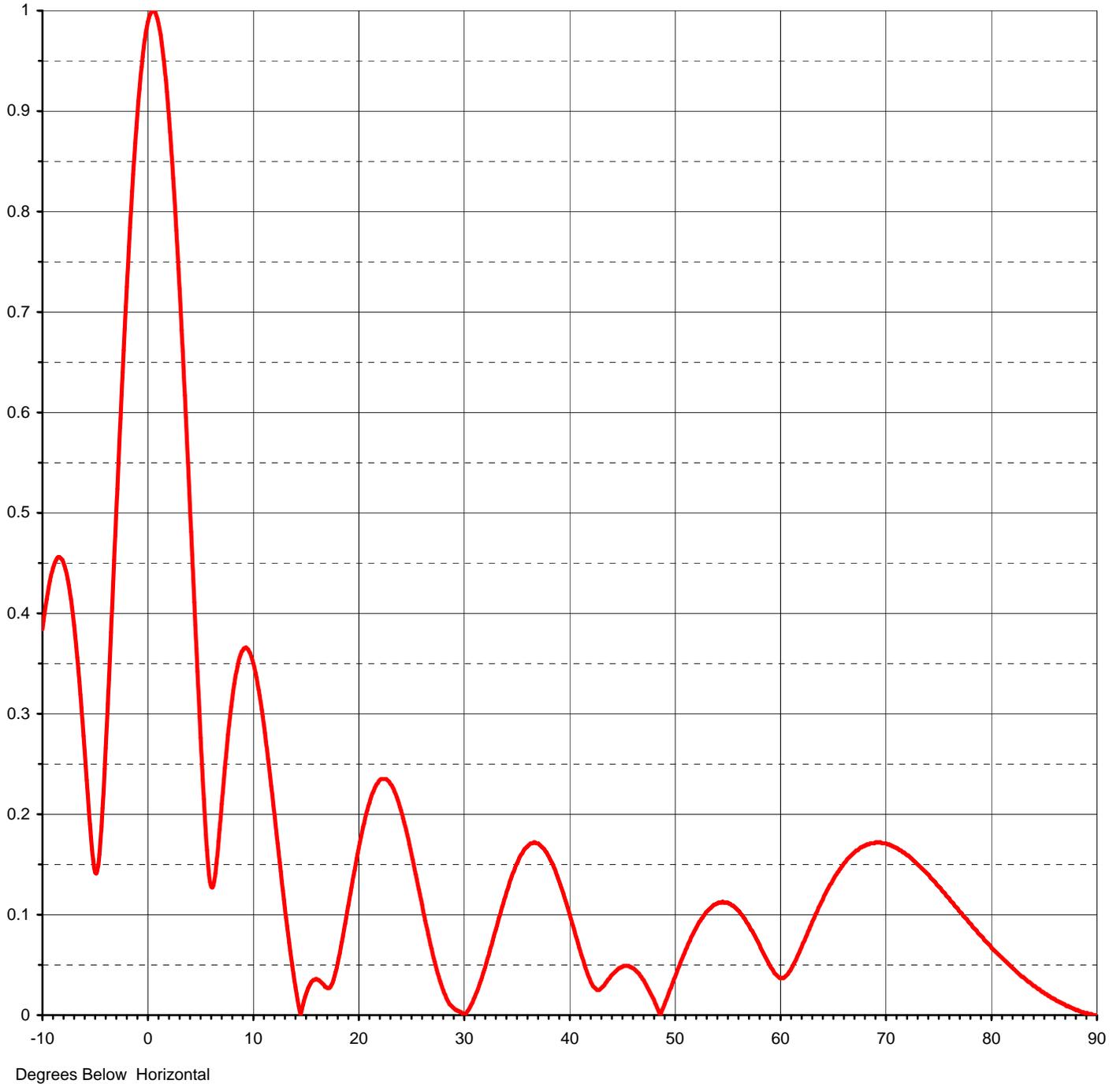




Proposal Number **C-00461** Revision: **1**
Date **29-Jun-06**
Call Letters **WMUM-DT** Channel **7**
Location **Cochran, GA**
Customer **GPTV**
Antenna Type **TLS-V8**

ELEVATION PATTERN

RMS Gain at Main Lobe	8.00 (9.03 dB)	Beam Tilt	0.50 deg
RMS Gain at Horizontal	7.80 (8.92 dB)	Frequency	177.00 MHz
Calculated / Measured	Calculated	Drawing #	08S080050-90



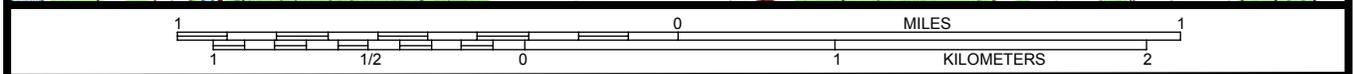
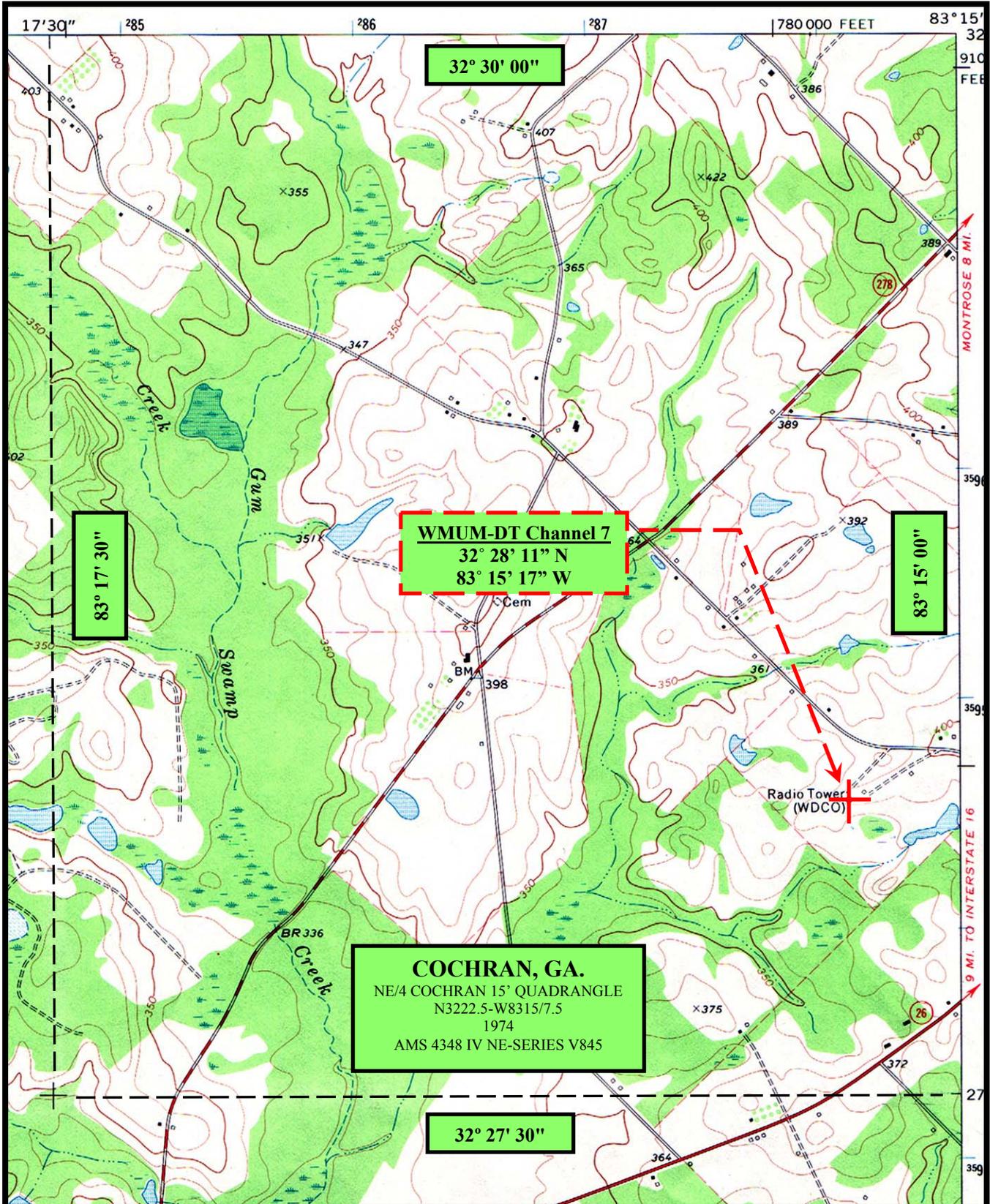


Proposal Number **C-00461** Revision: **1**
 Date **29-Jun-06**
 Call Letters **WMUM-DT** Channel **7**
 Location **Cochran, GA**
 Customer **GPTV**
 Antenna Type **TLS-V8**

TABULATION OF ELEVATION PATTERN

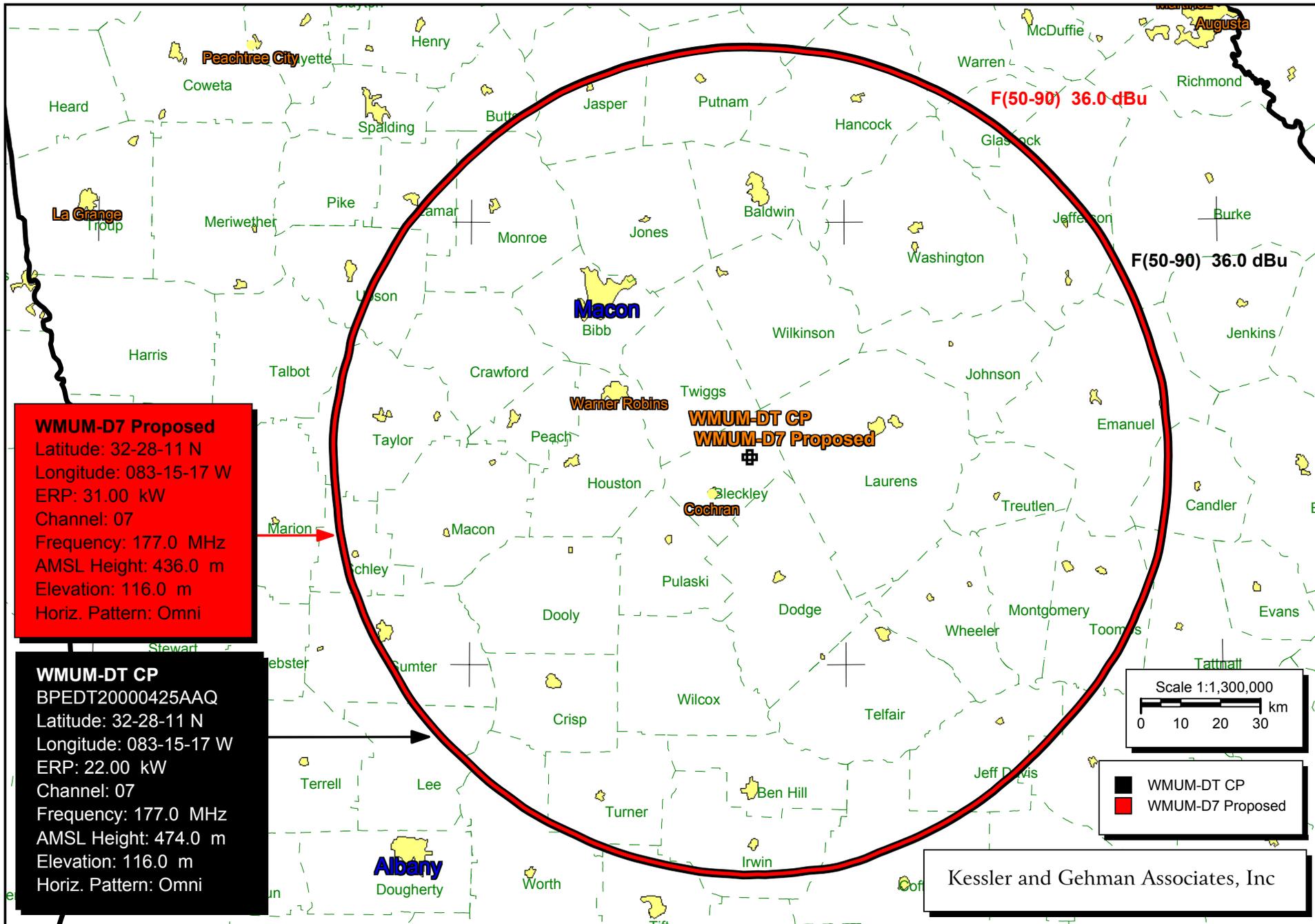
Elevation Pattern Drawing #: **08S080050-90**

Angle	Field										
-10.0	0.384	2.4	0.833	10.6	0.324	30.5	0.005	51.0	0.062	71.5	0.163
-9.5	0.420	2.6	0.799	10.8	0.311	31.0	0.016	51.5	0.074	72.0	0.159
-9.0	0.445	2.8	0.762	11.0	0.297	31.5	0.029	52.0	0.085	72.5	0.155
-8.5	0.456	3.0	0.723	11.5	0.255	32.0	0.045	52.5	0.094	73.0	0.150
-8.0	0.450	3.2	0.682	12.0	0.209	32.5	0.063	53.0	0.102	73.5	0.145
-7.5	0.428	3.4	0.639	12.5	0.162	33.0	0.082	53.5	0.107	74.0	0.140
-7.0	0.388	3.6	0.595	13.0	0.115	33.5	0.100	54.0	0.111	74.5	0.134
-6.5	0.332	3.8	0.550	13.5	0.072	34.0	0.118	54.5	0.112	75.0	0.128
-6.0	0.263	4.0	0.504	14.0	0.034	34.5	0.135	55.0	0.112	75.5	0.122
-5.5	0.190	4.2	0.458	14.5	0.004	35.0	0.149	55.5	0.109	76.0	0.116
-5.0	0.142	4.4	0.411	15.0	0.018	35.5	0.160	56.0	0.105	76.5	0.109
-4.5	0.173	4.6	0.365	15.5	0.031	36.0	0.167	56.5	0.099	77.0	0.103
-4.0	0.266	4.8	0.320	16.0	0.036	36.5	0.171	57.0	0.091	77.5	0.097
-3.5	0.381	5.0	0.276	16.5	0.033	37.0	0.171	57.5	0.082	78.0	0.091
-3.0	0.501	5.2	0.235	17.0	0.028	37.5	0.167	58.0	0.072	78.5	0.085
-2.8	0.548	5.4	0.197	17.5	0.030	38.0	0.160	58.5	0.061	79.0	0.079
-2.6	0.594	5.6	0.164	18.0	0.047	38.5	0.150	59.0	0.051	79.5	0.073
-2.4	0.640	5.8	0.140	18.5	0.073	39.0	0.136	59.5	0.042	80.0	0.067
-2.2	0.683	6.0	0.128	19.0	0.103	39.5	0.121	60.0	0.037	80.5	0.062
-2.0	0.725	6.2	0.129	19.5	0.133	40.0	0.104	60.5	0.038	81.0	0.057
-1.8	0.765	6.4	0.141	20.0	0.161	40.5	0.086	61.0	0.044	81.5	0.052
-1.6	0.802	6.6	0.161	20.5	0.187	41.0	0.067	61.5	0.054	82.0	0.047
-1.4	0.837	6.8	0.185	21.0	0.208	41.5	0.050	62.0	0.066	82.5	0.042
-1.2	0.868	7.0	0.210	21.5	0.223	42.0	0.036	62.5	0.078	83.0	0.038
-1.0	0.897	7.2	0.234	22.0	0.233	42.5	0.027	63.0	0.090	83.5	0.033
-0.8	0.922	7.4	0.257	22.5	0.235	43.0	0.026	63.5	0.102	84.0	0.029
-0.6	0.944	7.6	0.279	23.0	0.232	43.5	0.032	64.0	0.113	84.5	0.026
-0.4	0.963	7.8	0.298	23.5	0.222	44.0	0.039	64.5	0.126	85.0	0.022
-0.2	0.978	8.0	0.315	24.0	0.207	44.5	0.044	65.0	0.135	85.5	0.019
0.0	0.989	8.2	0.330	24.5	0.188	45.0	0.048	65.5	0.143	86.0	0.016
0.2	0.996	8.4	0.342	25.0	0.165	45.5	0.049	66.0	0.151	86.5	0.013
0.4	1.000	8.6	0.352	25.5	0.140	46.0	0.047	66.5	0.157	87.0	0.010
0.6	0.999	8.8	0.359	26.0	0.115	46.5	0.043	67.0	0.162	87.5	0.008
0.8	0.995	9.0	0.363	26.5	0.089	47.0	0.036	67.5	0.166	88.0	0.005
1.0	0.987	9.2	0.365	27.0	0.066	47.5	0.027	68.0	0.169	88.5	0.003
1.2	0.976	9.4	0.365	27.5	0.045	48.0	0.017	68.5	0.171	89.0	0.002
1.4	0.960	9.6	0.362	28.0	0.028	48.5	0.005	69.0	0.172	89.5	0.001
1.6	0.941	9.8	0.360	28.5	0.015	49.0	0.008	69.5	0.172	90.0	0.000
1.8	0.919	10.0	0.354	29.0	0.008	49.5	0.022	70.0	0.171		
2.0	0.893	10.2	0.346	29.5	0.004	50.0	0.036	70.5	0.169		
2.2	0.865	10.4	0.336	30.0	0.001	50.5	0.049	71.0	0.166		



KESSLER AND GEHMAN
 TELECOMMUNICATIONS CONSULTING ENGINEERS
 507 N.W. 60th Street, Suite C
 Gainesville, Florida 32607

WMUM-DT CHANNEL 7
COCHRAN, GEORGIA
 20080116 EXHIBIT 7



WMUM-DT Channel 7 (CP) vs. WMUM-DT Channel 7 (Proposed)

WMUM-DT Channel 7 (CP) Distance to Contour Tabulation

Call Letters: WMUM-DT CP
File Number: BPEDT20000425AAQ
Latitude: 32-28-11 N
Longitude: 083-15-17 W
ERP: 22.00 kW
Channel: 07
Frequency: 177.0 MHz
AMSL Height: 474.0 m
Elevation: 116.0 m
Horiz. Antenna Pattern: Omni

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 90.0 %
of Radials Calculated: 360
Field Strength: 36.00 dBuV/m

Primary Terrain: 3 Second US Terrain

Bearing (deg)	Distance (km)
-----	-----
0.0	102.8
1.0	102.7
2.0	102.7
3.0	102.7
4.0	102.7
5.0	102.8
6.0	102.8
7.0	102.7
8.0	102.7
9.0	102.8
10.0	102.9
11.0	103.0
12.0	103.1
13.0	103.1
14.0	103.2
15.0	103.2
16.0	103.2
17.0	103.2
18.0	103.2
19.0	103.2
20.0	103.2
21.0	103.2
22.0	103.1
23.0	103.2
24.0	103.2
25.0	103.2
26.0	103.2
27.0	103.3
28.0	103.3
29.0	103.4
30.0	103.4
31.0	103.4
32.0	103.4
33.0	103.5
34.0	103.5
35.0	103.5

WMUM-DT Channel 7 (CP) Distance to Contour Tabulation

36.0	103.5
37.0	103.6
38.0	103.5
39.0	103.5
40.0	103.5
41.0	103.5
42.0	103.5
43.0	103.5
44.0	103.5
45.0	103.5
46.0	103.5
47.0	103.5
48.0	103.5
49.0	103.5
50.0	103.6
51.0	103.7
52.0	103.8
53.0	103.9
54.0	104.0
55.0	104.0
56.0	104.1
57.0	104.2
58.0	104.2
59.0	104.2
60.0	104.1
61.0	104.1
62.0	104.1
63.0	104.1
64.0	104.1
65.0	104.1
66.0	104.2
67.0	104.2
68.0	104.3
69.0	104.3
70.0	104.3
71.0	104.3
72.0	104.3
73.0	104.4
74.0	104.4
75.0	104.5
76.0	104.5
77.0	104.7
78.0	104.8
79.0	105.0
80.0	105.1
81.0	105.1
82.0	105.0
83.0	104.9
84.0	104.8
85.0	104.8
86.0	104.9
87.0	105.0
88.0	105.0
89.0	105.0
90.0	105.0
91.0	105.0
92.0	104.9

WMUM-DT Channel 7 (CP) Distance to Contour Tabulation

93.0	105.0
94.0	105.0
95.0	105.1
96.0	105.1
97.0	105.1
98.0	105.1
99.0	105.1
100.0	105.1
101.0	105.2
102.0	105.3
103.0	105.3
104.0	105.3
105.0	105.2
106.0	105.1
107.0	105.0
108.0	104.9
109.0	104.8
110.0	104.8
111.0	104.6
112.0	104.6
113.0	104.6
114.0	104.5
115.0	104.5
116.0	104.5
117.0	104.5
118.0	104.4
119.0	104.3
120.0	104.1
121.0	104.0
122.0	104.1
123.0	104.0
124.0	103.9
125.0	103.8
126.0	103.7
127.0	103.6
128.0	103.5
129.0	103.3
130.0	103.3
131.0	103.2
132.0	103.2
133.0	103.2
134.0	103.2
135.0	103.2
136.0	103.2
137.0	103.2
138.0	103.3
139.0	103.3
140.0	103.4
141.0	103.4
142.0	103.4
143.0	103.5
144.0	103.7
145.0	103.7
146.0	103.8
147.0	103.8
148.0	103.8
149.0	103.8

WMUM-DT Channel 7 (CP) Distance to Contour Tabulation

150.0	103.9
151.0	103.9
152.0	104.0
153.0	104.0
154.0	104.0
155.0	104.0
156.0	104.1
157.0	104.1
158.0	104.1
159.0	104.1
160.0	104.2
161.0	104.2
162.0	104.3
163.0	104.5
164.0	104.7
165.0	104.8
166.0	104.9
167.0	105.0
168.0	105.1
169.0	105.1
170.0	104.9
171.0	104.8
172.0	104.7
173.0	104.7
174.0	104.7
175.0	104.7
176.0	104.7
177.0	104.7
178.0	104.7
179.0	104.6
180.0	104.7
181.0	104.8
182.0	104.6
183.0	104.6
184.0	104.6
185.0	104.6
186.0	104.6
187.0	104.6
188.0	104.5
189.0	104.5
190.0	104.4
191.0	104.4
192.0	104.4
193.0	104.4
194.0	104.4
195.0	104.4
196.0	104.5
197.0	104.5
198.0	104.5
199.0	104.4
200.0	104.4
201.0	104.4
202.0	104.4
203.0	104.4
204.0	104.3
205.0	104.3
206.0	104.3

WMUM-DT Channel 7 (CP) Distance to Contour Tabulation

207.0	104.3
208.0	104.4
209.0	104.5
210.0	104.5
211.0	104.5
212.0	104.6
213.0	104.6
214.0	104.5
215.0	104.4
216.0	104.4
217.0	104.4
218.0	104.4
219.0	104.4
220.0	104.3
221.0	104.3
222.0	104.2
223.0	104.2
224.0	104.2
225.0	104.2
226.0	104.3
227.0	104.4
228.0	104.4
229.0	104.4
230.0	104.4
231.0	104.4
232.0	104.5
233.0	104.5
234.0	104.5
235.0	104.5
236.0	104.4
237.0	104.3
238.0	104.2
239.0	104.1
240.0	104.1
241.0	104.2
242.0	104.2
243.0	104.3
244.0	104.4
245.0	104.5
246.0	104.5
247.0	104.5
248.0	104.5
249.0	104.5
250.0	104.4
251.0	104.5
252.0	104.6
253.0	104.7
254.0	104.7
255.0	104.6
256.0	104.5
257.0	104.5
258.0	104.4
259.0	104.4
260.0	104.4
261.0	104.3
262.0	104.2
263.0	104.1

WMUM-DT Channel 7 (CP) Distance to Contour Tabulation

264.0	104.1
265.0	104.1
266.0	104.2
267.0	104.2
268.0	104.3
269.0	104.3
270.0	104.4
271.0	104.5
272.0	104.5
273.0	104.6
274.0	104.5
275.0	104.5
276.0	104.4
277.0	104.3
278.0	104.2
279.0	104.1
280.0	104.1
281.0	104.2
282.0	104.1
283.0	104.0
284.0	103.8
285.0	103.9
286.0	104.1
287.0	104.2
288.0	104.2
289.0	104.1
290.0	104.0
291.0	103.9
292.0	103.9
293.0	103.9
294.0	103.9
295.0	103.9
296.0	103.9
297.0	103.7
298.0	103.7
299.0	103.6
300.0	103.7
301.0	103.7
302.0	103.7
303.0	103.8
304.0	103.8
305.0	103.6
306.0	103.4
307.0	103.3
308.0	103.3
309.0	103.2
310.0	103.1
311.0	103.0
312.0	102.9
313.0	102.8
314.0	102.8
315.0	102.8
316.0	102.9
317.0	102.8
318.0	102.8
319.0	102.8
320.0	102.8

WMUM-DT Channel 7 (CP) Distance to Contour Tabulation

321.0	102.9
322.0	102.9
323.0	102.9
324.0	102.9
325.0	102.9
326.0	102.9
327.0	102.9
328.0	102.8
329.0	102.8
330.0	102.9
331.0	102.9
332.0	103.0
333.0	103.0
334.0	102.9
335.0	102.9
336.0	102.8
337.0	102.8
338.0	102.7
339.0	102.6
340.0	102.6
341.0	102.7
342.0	102.7
343.0	102.7
344.0	102.6
345.0	102.6
346.0	102.6
347.0	102.6
348.0	102.6
349.0	102.6
350.0	102.7
351.0	102.7
352.0	102.7
353.0	102.7
354.0	102.7
355.0	102.8
356.0	102.9
357.0	102.9
358.0	102.8
359.0	102.8

WMUM-DT Channel 7 (Proposed) Distance to Contour Tabulation

Call Letters: WMUM-D7 Proposed
Latitude: 32-28-11 N
Longitude: 083-15-17 W
ERP: 31.00 kW
Channel: 07
Frequency: 177.0 MHz
AMSL Height: 436.0 m
Elevation: 116.0 m
Horiz. Antenna Pattern: Omni

Type of contour: FCC
Location Variability: 50.0 %
Time Variability: 90.0 %
of Radials Calculated: 360
Field Strength: 36.00 dBuV/m

Primary Terrain: 3 Second US Terrain

Bearing (deg)	Distance (km)
-----	-----
0.0	102.6
1.0	102.6
2.0	102.6
3.0	102.6
4.0	102.6
5.0	102.6
6.0	102.6
7.0	102.6
8.0	102.6
9.0	102.7
10.0	102.8
11.0	102.9
12.0	103.0
13.0	103.0
14.0	103.0
15.0	103.1
16.0	103.1
17.0	103.1
18.0	103.0
19.0	103.0
20.0	103.1
21.0	103.0
22.0	103.0
23.0	103.1
24.0	103.1
25.0	103.1
26.0	103.1
27.0	103.2
28.0	103.2
29.0	103.2
30.0	103.3
31.0	103.3
32.0	103.3
33.0	103.4
34.0	103.4
35.0	103.4
36.0	103.4

WMUM-DT Channel 7 (Proposed) Distance to Contour Tabulation

37.0	103.5
38.0	103.4
39.0	103.4
40.0	103.4
41.0	103.4
42.0	103.4
43.0	103.4
44.0	103.4
45.0	103.4
46.0	103.4
47.0	103.4
48.0	103.4
49.0	103.4
50.0	103.5
51.0	103.6
52.0	103.7
53.0	103.8
54.0	103.9
55.0	104.0
56.0	104.1
57.0	104.1
58.0	104.1
59.0	104.1
60.0	104.1
61.0	104.0
62.0	104.0
63.0	104.0
64.0	104.1
65.0	104.1
66.0	104.1
67.0	104.2
68.0	104.2
69.0	104.2
70.0	104.2
71.0	104.2
72.0	104.3
73.0	104.3
74.0	104.4
75.0	104.4
76.0	104.5
77.0	104.6
78.0	104.8
79.0	105.0
80.0	105.1
81.0	105.0
82.0	105.0
83.0	104.8
84.0	104.8
85.0	104.8
86.0	104.8
87.0	104.9
88.0	104.9
89.0	104.9
90.0	104.9
91.0	104.9
92.0	104.9
93.0	104.9

WMUM-DT Channel 7 (Proposed) Distance to Contour Tabulation

94.0	105.0
95.0	105.0
96.0	105.0
97.0	105.0
98.0	105.0
99.0	105.0
100.0	105.1
101.0	105.1
102.0	105.2
103.0	105.3
104.0	105.3
105.0	105.2
106.0	105.0
107.0	104.9
108.0	104.8
109.0	104.8
110.0	104.7
111.0	104.6
112.0	104.5
113.0	104.5
114.0	104.5
115.0	104.4
116.0	104.4
117.0	104.4
118.0	104.4
119.0	104.2
120.0	104.0
121.0	104.0
122.0	104.0
123.0	104.0
124.0	103.8
125.0	103.7
126.0	103.6
127.0	103.5
128.0	103.4
129.0	103.2
130.0	103.1
131.0	103.1
132.0	103.1
133.0	103.1
134.0	103.1
135.0	103.1
136.0	103.1
137.0	103.1
138.0	103.2
139.0	103.2
140.0	103.3
141.0	103.3
142.0	103.3
143.0	103.4
144.0	103.6
145.0	103.6
146.0	103.7
147.0	103.7
148.0	103.8
149.0	103.7
150.0	103.8

WMUM-DT Channel 7 (Proposed) Distance to Contour Tabulation

151.0	103.9
152.0	103.9
153.0	103.9
154.0	103.9
155.0	104.0
156.0	104.0
157.0	104.1
158.0	104.0
159.0	104.1
160.0	104.1
161.0	104.1
162.0	104.2
163.0	104.4
164.0	104.7
165.0	104.8
166.0	104.8
167.0	104.9
168.0	105.0
169.0	105.0
170.0	104.9
171.0	104.7
172.0	104.6
173.0	104.6
174.0	104.7
175.0	104.6
176.0	104.6
177.0	104.6
178.0	104.7
179.0	104.6
180.0	104.6
181.0	104.7
182.0	104.6
183.0	104.5
184.0	104.5
185.0	104.5
186.0	104.5
187.0	104.6
188.0	104.5
189.0	104.4
190.0	104.4
191.0	104.3
192.0	104.3
193.0	104.3
194.0	104.3
195.0	104.3
196.0	104.4
197.0	104.4
198.0	104.4
199.0	104.4
200.0	104.3
201.0	104.3
202.0	104.4
203.0	104.3
204.0	104.2
205.0	104.2
206.0	104.2
207.0	104.3

WMUM-DT Channel 7 (Proposed) Distance to Contour Tabulation

208.0	104.3
209.0	104.4
210.0	104.4
211.0	104.5
212.0	104.5
213.0	104.5
214.0	104.4
215.0	104.3
216.0	104.3
217.0	104.3
218.0	104.4
219.0	104.4
220.0	104.3
221.0	104.2
222.0	104.1
223.0	104.1
224.0	104.1
225.0	104.2
226.0	104.2
227.0	104.3
228.0	104.3
229.0	104.4
230.0	104.4
231.0	104.4
232.0	104.4
233.0	104.4
234.0	104.5
235.0	104.4
236.0	104.4
237.0	104.2
238.0	104.1
239.0	104.0
240.0	104.0
241.0	104.1
242.0	104.2
243.0	104.2
244.0	104.3
245.0	104.4
246.0	104.4
247.0	104.4
248.0	104.5
249.0	104.4
250.0	104.4
251.0	104.4
252.0	104.6
253.0	104.7
254.0	104.6
255.0	104.5
256.0	104.5
257.0	104.4
258.0	104.4
259.0	104.4
260.0	104.4
261.0	104.3
262.0	104.2
263.0	104.1
264.0	104.1

WMUM-DT Channel 7 (Proposed) Distance to Contour Tabulation

265.0	104.1
266.0	104.1
267.0	104.2
268.0	104.2
269.0	104.2
270.0	104.3
271.0	104.4
272.0	104.5
273.0	104.5
274.0	104.5
275.0	104.5
276.0	104.4
277.0	104.3
278.0	104.1
279.0	104.0
280.0	104.0
281.0	104.1
282.0	104.0
283.0	103.9
284.0	103.7
285.0	103.8
286.0	104.1
287.0	104.1
288.0	104.1
289.0	104.0
290.0	103.9
291.0	103.9
292.0	103.8
293.0	103.8
294.0	103.9
295.0	103.9
296.0	103.8
297.0	103.7
298.0	103.6
299.0	103.5
300.0	103.6
301.0	103.6
302.0	103.6
303.0	103.7
304.0	103.7
305.0	103.5
306.0	103.3
307.0	103.2
308.0	103.2
309.0	103.1
310.0	103.0
311.0	102.9
312.0	102.8
313.0	102.7
314.0	102.7
315.0	102.7
316.0	102.7
317.0	102.7
318.0	102.6
319.0	102.6
320.0	102.6
321.0	102.7

WMUM-DT Channel 7 (Proposed) Distance to Contour Tabulation

322.0	102.7
323.0	102.7
324.0	102.7
325.0	102.8
326.0	102.8
327.0	102.7
328.0	102.7
329.0	102.7
330.0	102.7
331.0	102.8
332.0	102.9
333.0	102.9
334.0	102.8
335.0	102.8
336.0	102.7
337.0	102.7
338.0	102.6
339.0	102.5
340.0	102.5
341.0	102.5
342.0	102.6
343.0	102.5
344.0	102.5
345.0	102.4
346.0	102.4
347.0	102.4
348.0	102.4
349.0	102.4
350.0	102.5
351.0	102.5
352.0	102.6
353.0	102.6
354.0	102.6
355.0	102.7
356.0	102.8
357.0	102.7
358.0	102.7
359.0	102.7

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

Radial	WMUM-DT CP distance to contours (km)	WMUM-DT Prop distance to contours (km)	PASS OR FAIL	Difference
0	102.8	102.6	PASS	0.2
1	102.7	102.6	PASS	0.1
2	102.7	102.6	PASS	0.1
3	102.7	102.6	PASS	0.1
4	102.7	102.6	PASS	0.1
5	102.8	102.6	PASS	0.2
6	102.8	102.6	PASS	0.2
7	102.7	102.6	PASS	0.1
8	102.7	102.6	PASS	0.1
9	102.8	102.7	PASS	0.1
10	102.9	102.8	PASS	0.1
11	103.0	102.9	PASS	0.1
12	103.1	103.0	PASS	0.1
13	103.1	103.0	PASS	0.1
14	103.2	103.0	PASS	0.2
15	103.2	103.1	PASS	0.1
16	103.2	103.1	PASS	0.1
17	103.2	103.1	PASS	0.1
18	103.2	103.0	PASS	0.2
19	103.2	103.0	PASS	0.2
20	103.2	103.1	PASS	0.1
21	103.2	103.0	PASS	0.2
22	103.1	103.0	PASS	0.1
23	103.2	103.1	PASS	0.1
24	103.2	103.1	PASS	0.1
25	103.2	103.1	PASS	0.1
26	103.2	103.1	PASS	0.1
27	103.3	103.2	PASS	0.1
28	103.3	103.2	PASS	0.1
29	103.4	103.2	PASS	0.2
30	103.4	103.3	PASS	0.1
31	103.4	103.3	PASS	0.1
32	103.4	103.3	PASS	0.1
33	103.5	103.4	PASS	0.1
34	103.5	103.4	PASS	0.1
35	103.5	103.4	PASS	0.1
36	103.5	103.4	PASS	0.1
37	103.6	103.5	PASS	0.1
38	103.5	103.4	PASS	0.1

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

39	103.5	103.4	PASS	0.1
40	103.5	103.4	PASS	0.1
41	103.5	103.4	PASS	0.1
42	103.5	103.4	PASS	0.1
43	103.5	103.4	PASS	0.1
44	103.5	103.4	PASS	0.1
45	103.5	103.4	PASS	0.1
46	103.5	103.4	PASS	0.1
47	103.5	103.4	PASS	0.1
48	103.5	103.4	PASS	0.1
49	103.5	103.4	PASS	0.1
50	103.6	103.5	PASS	0.1
51	103.7	103.6	PASS	0.1
52	103.8	103.7	PASS	0.1
53	103.9	103.8	PASS	0.1
54	104.0	103.9	PASS	0.1
55	104.0	104.0	PASS	0.0
56	104.1	104.1	PASS	0.0
57	104.2	104.1	PASS	0.1
58	104.2	104.1	PASS	0.1
59	104.2	104.1	PASS	0.1
60	104.1	104.1	PASS	0.0
61	104.1	104.0	PASS	0.1
62	104.1	104.0	PASS	0.1
63	104.1	104.0	PASS	0.1
64	104.1	104.1	PASS	0.0
65	104.1	104.1	PASS	0.0
66	104.2	104.1	PASS	0.1
67	104.2	104.2	PASS	0.0
68	104.3	104.2	PASS	0.1
69	104.3	104.2	PASS	0.1
70	104.3	104.2	PASS	0.1
71	104.3	104.2	PASS	0.1
72	104.3	104.3	PASS	0.0
73	104.4	104.3	PASS	0.1
74	104.4	104.4	PASS	0.0
75	104.5	104.4	PASS	0.1
76	104.5	104.5	PASS	0.0
77	104.7	104.6	PASS	0.1
78	104.8	104.8	PASS	0.0
79	105.0	105.0	PASS	0.0
80	105.1	105.1	PASS	0.0

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

81	105.1	105.0	PASS	0.1
82	105.0	105.0	PASS	0.0
83	104.9	104.8	PASS	0.1
84	104.8	104.8	PASS	0.0
85	104.8	104.8	PASS	0.0
86	104.9	104.8	PASS	0.1
87	105.0	104.9	PASS	0.1
88	105.0	104.9	PASS	0.1
89	105.0	104.9	PASS	0.1
90	105.0	104.9	PASS	0.1
91	105.0	104.9	PASS	0.1
92	104.9	104.9	PASS	0.0
93	105.0	104.9	PASS	0.1
94	105.0	105.0	PASS	0.0
95	105.1	105.0	PASS	0.1
96	105.1	105.0	PASS	0.1
97	105.1	105.0	PASS	0.1
98	105.1	105.0	PASS	0.1
99	105.1	105.0	PASS	0.1
100	105.1	105.1	PASS	0.0
101	105.2	105.1	PASS	0.1
102	105.3	105.2	PASS	0.1
103	105.3	105.3	PASS	0.0
104	105.3	105.3	PASS	0.0
105	105.2	105.2	PASS	0.0
106	105.1	105.0	PASS	0.1
107	105.0	104.9	PASS	0.1
108	104.9	104.8	PASS	0.1
109	104.8	104.8	PASS	0.0
110	104.8	104.7	PASS	0.1
111	104.6	104.6	PASS	0.0
112	104.6	104.5	PASS	0.1
113	104.6	104.5	PASS	0.1
114	104.5	104.5	PASS	0.0
115	104.5	104.4	PASS	0.1
116	104.5	104.4	PASS	0.1
117	104.5	104.4	PASS	0.1
118	104.4	104.4	PASS	0.0
119	104.3	104.2	PASS	0.1
120	104.1	104.0	PASS	0.1
121	104.0	104.0	PASS	0.0
122	104.1	104.0	PASS	0.1

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

123	104.0	104.0	PASS	0.0
124	103.9	103.8	PASS	0.1
125	103.8	103.7	PASS	0.1
126	103.7	103.6	PASS	0.1
127	103.6	103.5	PASS	0.1
128	103.5	103.4	PASS	0.1
129	103.3	103.2	PASS	0.1
130	103.3	103.1	PASS	0.2
131	103.2	103.1	PASS	0.1
132	103.2	103.1	PASS	0.1
133	103.2	103.1	PASS	0.1
134	103.2	103.1	PASS	0.1
135	103.2	103.1	PASS	0.1
136	103.2	103.1	PASS	0.1
137	103.2	103.1	PASS	0.1
138	103.3	103.2	PASS	0.1
139	103.3	103.2	PASS	0.1
140	103.4	103.3	PASS	0.1
141	103.4	103.3	PASS	0.1
142	103.4	103.3	PASS	0.1
143	103.5	103.4	PASS	0.1
144	103.7	103.6	PASS	0.1
145	103.7	103.6	PASS	0.1
146	103.8	103.7	PASS	0.1
147	103.8	103.7	PASS	0.1
148	103.8	103.8	PASS	0.0
149	103.8	103.7	PASS	0.1
150	103.9	103.8	PASS	0.1
151	103.9	103.9	PASS	0.0
152	104.0	103.9	PASS	0.1
153	104.0	103.9	PASS	0.1
154	104.0	103.9	PASS	0.1
155	104.0	104.0	PASS	0.0
156	104.1	104.0	PASS	0.1
157	104.1	104.1	PASS	0.0
158	104.1	104.0	PASS	0.1
159	104.1	104.1	PASS	0.0
160	104.2	104.1	PASS	0.1
161	104.2	104.1	PASS	0.1
162	104.3	104.2	PASS	0.1
163	104.5	104.4	PASS	0.1
164	104.7	104.7	PASS	0.0

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

165	104.8	104.8	PASS	0.0
166	104.9	104.8	PASS	0.1
167	105.0	104.9	PASS	0.1
168	105.1	105.0	PASS	0.1
169	105.1	105.0	PASS	0.1
170	104.9	104.9	PASS	0.0
171	104.8	104.7	PASS	0.1
172	104.7	104.6	PASS	0.1
173	104.7	104.6	PASS	0.1
174	104.7	104.7	PASS	0.0
175	104.7	104.6	PASS	0.1
176	104.7	104.6	PASS	0.1
177	104.7	104.6	PASS	0.1
178	104.7	104.7	PASS	0.0
179	104.6	104.6	PASS	0.0
180	104.7	104.6	PASS	0.1
181	104.8	104.7	PASS	0.1
182	104.6	104.6	PASS	0.0
183	104.6	104.5	PASS	0.1
184	104.6	104.5	PASS	0.1
185	104.6	104.5	PASS	0.1
186	104.6	104.5	PASS	0.1
187	104.6	104.6	PASS	0.0
188	104.5	104.5	PASS	0.0
189	104.5	104.4	PASS	0.1
190	104.4	104.4	PASS	0.0
191	104.4	104.3	PASS	0.1
192	104.4	104.3	PASS	0.1
193	104.4	104.3	PASS	0.1
194	104.4	104.3	PASS	0.1
195	104.4	104.3	PASS	0.1
196	104.5	104.4	PASS	0.1
197	104.5	104.4	PASS	0.1
198	104.5	104.4	PASS	0.1
199	104.4	104.4	PASS	0.0
200	104.4	104.3	PASS	0.1
201	104.4	104.3	PASS	0.1
202	104.4	104.4	PASS	0.0
203	104.4	104.3	PASS	0.1
204	104.3	104.2	PASS	0.1
205	104.3	104.2	PASS	0.1
206	104.3	104.2	PASS	0.1

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

207	104.3	104.3	PASS	0.0
208	104.4	104.3	PASS	0.1
209	104.5	104.4	PASS	0.1
210	104.5	104.4	PASS	0.1
211	104.5	104.5	PASS	0.0
212	104.6	104.5	PASS	0.1
213	104.6	104.5	PASS	0.1
214	104.5	104.4	PASS	0.1
215	104.4	104.3	PASS	0.1
216	104.4	104.3	PASS	0.1
217	104.4	104.3	PASS	0.1
218	104.4	104.4	PASS	0.0
219	104.4	104.4	PASS	0.0
220	104.3	104.3	PASS	0.0
221	104.3	104.2	PASS	0.1
222	104.2	104.1	PASS	0.1
223	104.2	104.1	PASS	0.1
224	104.2	104.1	PASS	0.1
225	104.2	104.2	PASS	0.0
226	104.3	104.2	PASS	0.1
227	104.4	104.3	PASS	0.1
228	104.4	104.3	PASS	0.1
229	104.4	104.4	PASS	0.0
230	104.4	104.4	PASS	0.0
231	104.4	104.4	PASS	0.0
232	104.5	104.4	PASS	0.1
233	104.5	104.4	PASS	0.1
234	104.5	104.5	PASS	0.0
235	104.5	104.4	PASS	0.1
236	104.4	104.4	PASS	0.0
237	104.3	104.2	PASS	0.1
238	104.2	104.1	PASS	0.1
239	104.1	104.0	PASS	0.1
240	104.1	104.0	PASS	0.1
241	104.2	104.1	PASS	0.1
242	104.2	104.2	PASS	0.0
243	104.3	104.2	PASS	0.1
244	104.4	104.3	PASS	0.1
245	104.5	104.4	PASS	0.1
246	104.5	104.4	PASS	0.1
247	104.5	104.4	PASS	0.1
248	104.5	104.5	PASS	0.0

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

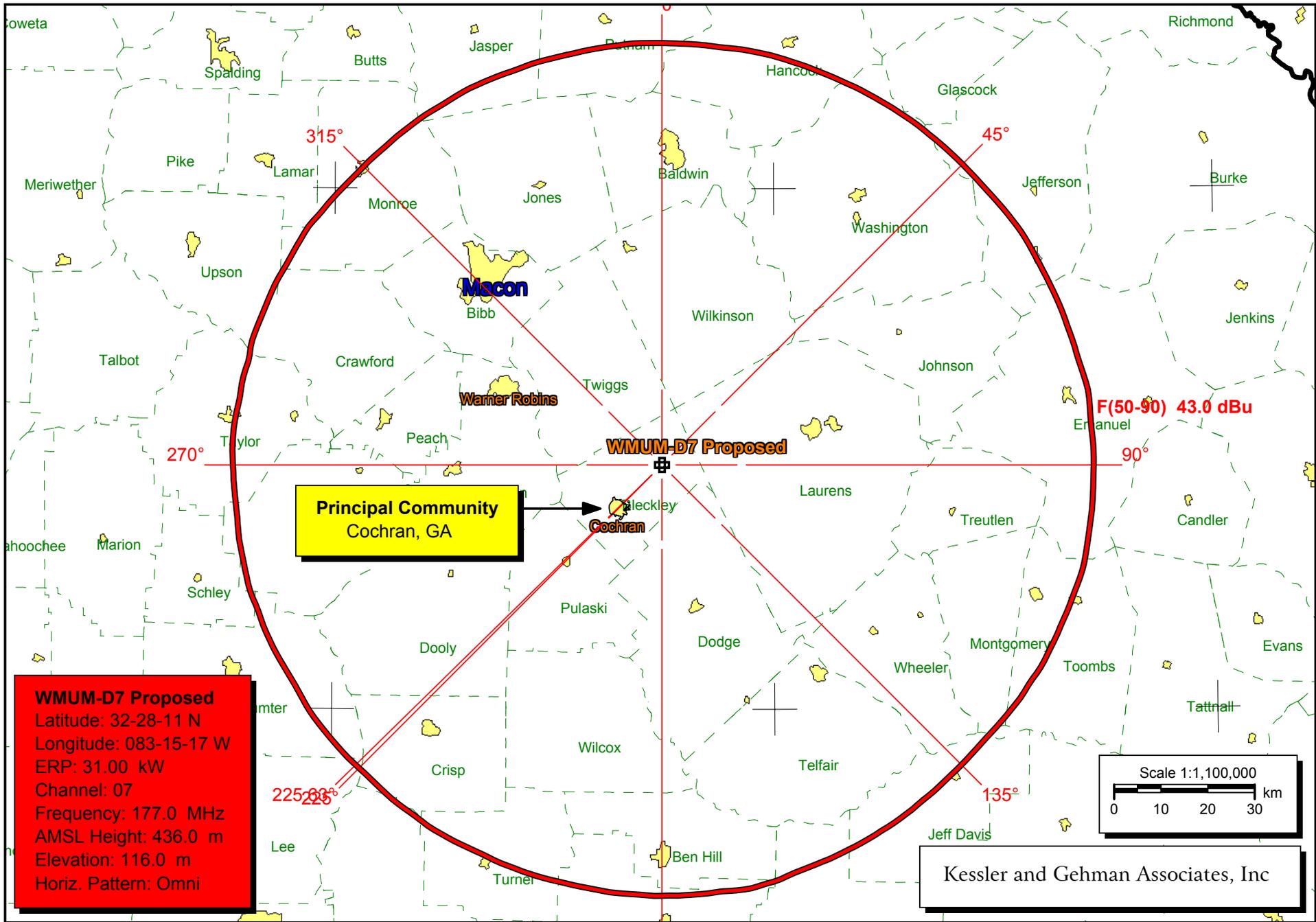
249	104.5	104.4	PASS	0.1
250	104.4	104.4	PASS	0.0
251	104.5	104.4	PASS	0.1
252	104.6	104.6	PASS	0.0
253	104.7	104.7	PASS	0.0
254	104.7	104.6	PASS	0.1
255	104.6	104.5	PASS	0.1
256	104.5	104.5	PASS	0.0
257	104.5	104.4	PASS	0.1
258	104.4	104.4	PASS	0.0
259	104.4	104.4	PASS	0.0
260	104.4	104.4	PASS	0.0
261	104.3	104.3	PASS	0.0
262	104.2	104.2	PASS	0.0
263	104.1	104.1	PASS	0.0
264	104.1	104.1	PASS	0.0
265	104.1	104.1	PASS	0.0
266	104.2	104.1	PASS	0.1
267	104.2	104.2	PASS	0.0
268	104.3	104.2	PASS	0.1
269	104.3	104.2	PASS	0.1
270	104.4	104.3	PASS	0.1
271	104.5	104.4	PASS	0.1
272	104.5	104.5	PASS	0.0
273	104.6	104.5	PASS	0.1
274	104.5	104.5	PASS	0.0
275	104.5	104.5	PASS	0.0
276	104.4	104.4	PASS	0.0
277	104.3	104.3	PASS	0.0
278	104.2	104.1	PASS	0.1
279	104.1	104.0	PASS	0.1
280	104.1	104.0	PASS	0.1
281	104.2	104.1	PASS	0.1
282	104.1	104.0	PASS	0.1
283	104.0	103.9	PASS	0.1
284	103.8	103.7	PASS	0.1
285	103.9	103.8	PASS	0.1
286	104.1	104.1	PASS	0.0
287	104.2	104.1	PASS	0.1
288	104.2	104.1	PASS	0.1
289	104.1	104.0	PASS	0.1
290	104.0	103.9	PASS	0.1

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

291	103.9	103.9	PASS	0.0
292	103.9	103.8	PASS	0.1
293	103.9	103.8	PASS	0.1
294	103.9	103.9	PASS	0.0
295	103.9	103.9	PASS	0.0
296	103.9	103.8	PASS	0.1
297	103.7	103.7	PASS	0.0
298	103.7	103.6	PASS	0.1
299	103.6	103.5	PASS	0.1
300	103.7	103.6	PASS	0.1
301	103.7	103.6	PASS	0.1
302	103.7	103.6	PASS	0.1
303	103.8	103.7	PASS	0.1
304	103.8	103.7	PASS	0.1
305	103.6	103.5	PASS	0.1
306	103.4	103.3	PASS	0.1
307	103.3	103.2	PASS	0.1
308	103.3	103.2	PASS	0.1
309	103.2	103.1	PASS	0.1
310	103.1	103.0	PASS	0.1
311	103.0	102.9	PASS	0.1
312	102.9	102.8	PASS	0.1
313	102.8	102.7	PASS	0.1
314	102.8	102.7	PASS	0.1
315	102.8	102.7	PASS	0.1
316	102.9	102.7	PASS	0.2
317	102.8	102.7	PASS	0.1
318	102.8	102.6	PASS	0.2
319	102.8	102.6	PASS	0.2
320	102.8	102.6	PASS	0.2
321	102.9	102.7	PASS	0.2
322	102.9	102.7	PASS	0.2
323	102.9	102.7	PASS	0.2
324	102.9	102.7	PASS	0.2
325	102.9	102.8	PASS	0.1
326	102.9	102.8	PASS	0.1
327	102.9	102.7	PASS	0.2
328	102.8	102.7	PASS	0.1
329	102.8	102.7	PASS	0.1
330	102.9	102.7	PASS	0.2
331	102.9	102.8	PASS	0.1
332	103.0	102.9	PASS	0.1

WMUM-DT (CP vs. Proposed) Distance to Contour Comparison Chart

333	103.0	102.9	PASS	0.1
334	102.9	102.8	PASS	0.1
335	102.9	102.8	PASS	0.1
336	102.8	102.7	PASS	0.1
337	102.8	102.7	PASS	0.1
338	102.7	102.6	PASS	0.1
339	102.6	102.5	PASS	0.1
340	102.6	102.5	PASS	0.1
341	102.7	102.5	PASS	0.2
342	102.7	102.6	PASS	0.1
343	102.7	102.5	PASS	0.2
344	102.6	102.5	PASS	0.1
345	102.6	102.4	PASS	0.2
346	102.6	102.4	PASS	0.2
347	102.6	102.4	PASS	0.2
348	102.6	102.4	PASS	0.2
349	102.6	102.4	PASS	0.2
350	102.7	102.5	PASS	0.2
351	102.7	102.5	PASS	0.2
352	102.7	102.6	PASS	0.1
353	102.7	102.6	PASS	0.1
354	102.7	102.6	PASS	0.1
355	102.8	102.7	PASS	0.1
356	102.9	102.8	PASS	0.1
357	102.9	102.7	PASS	0.2
358	102.8	102.7	PASS	0.1
359	102.8	102.7	PASS	0.1



Proposed WMUM-DT Channel 7 F(50,90) 43.0 dBuV/m Principal Community Contour